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2 18. (Amended) The multi-layered image display of claim 17, wherein the first screen is a selectively transparent foreground screen capable of generating a foreground image and the second screen is a background screen capable of generating a background image.

3 19. (Amended) The multi-layered image display of claim 17, wherein the first screen is a first selectively transparent foreground screen capable of generating a first foreground image and the second screen is a second selectively transparent foreground screen capable of generating a second foreground image.

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15 31. (Amended) A multi-layered image display comprising:  
a first screen capable of displaying a first image;  
a second screen capable of displaying a second image, wherein the first screen and the second screen are transmissive polarized display devices; there is no polarizer on at least one face of at least the first screen or the second screen; and the first screen is in front of the second screen; and  
at least one object between the first screen and the second screen capable of randomizing polarized light.

**REMARKS**

By this Amendment, Applicants amend claims 17-19 and 31 to more appropriately claim the invention. Applicants submit that no new matter has been added.

In the last Office Action, the Examiner rejected claim 1 under 35 U.S.C. § 112 as indefinite; rejected claims 17-22 under 35 U.S.C. § 102(e) as anticipated by *Sullivan* in

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U.S. Patent No. 6,100,862 ("*Sullivan*"); rejected claims 31-48 under 35 U.S.C. § 102(b) as anticipated by *Leung et al.* in U.S. Patent No. 5,745,197 ("*Leung*"); allowed claims 28-30 and their associated multiple dependent claims; and indicated claims 22-27 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112 set forth in the Office Action and to include all recitations from their respective base and intervening claims.

Applicants thank the Examiner for allowing claims 28-30 and its associated multiple dependent claims and for indicating that claims 22-27 contain allowable subject matter.

#### **REJECTION OF CLAIM 1 UNDER 35 U.S.C. § 112**

On page 2 of the Office Action, the Examiner rejected claim 1 under 35 U.S.C. § 112 as indefinite for not defining a "slightly diffuse layer." Since Applicants cancelled claim 1 in the Preliminary Amendment of March 1, 2002, Applicants assume the Examiner is referring to claim 17 and is instead rejecting claim 17 under 35 U.S.C. § 112 as indefinite. Applicants have amended claim 17 to further clarify and define the "slightly diffuse layer" to be adapted to prevent observation of an interference pattern by an observer of a multi-layered image display. Therefore, claim 17 is deemed definite under 35 U.S.C. § 112.

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**REJECTION OF CLAIMS 17-22 UNDER 35 U.S.C. § 102(e)**

Applicants respectfully traverse the rejection of claim 17 under 35 U.S.C § 102(e) as anticipated by *Sullivan* because *Sullivan* does not teach each and every element of claim 17. See M.P.E.P. § 2131, 8<sup>th</sup> Ed. (2001).

Particularly, *Sullivan* does not teach at least a first screen capable of generating a first image or a second screen capable of generating a second image, as recited in amended claim 17. As illustrated in Fig. 1, *Sullivan* merely teaches projecting images on optical elements 36-42. Optical elements 36-42 form a stack of single pixel liquid crystal displays (LCDs) (col. 8, lines 14-16). Each single pixel LCD acts as a projection surface for a projected image from image projector 20 (Figs. 4-7 and col. 10, lines 1-6). The single pixel LCDs are sequentially activated to provide a projection surface at various distances from image projector 20 (Figs. 4-7 and col. 10, lines 13-19). Hence, *Sullivan* does not teach at least a first screen capable of generating a first image or a second screen capable of generating a second image because the single pixel LCDs do not generate any images. The single pixel LCDs merely provide an area to display projected images.

Additionally, *Sullivan* does not teach at least a slightly diffuse layer, between the first screen and the second screen, that is adapted to prevent observation of an interference pattern by an observer of a multi-layered image display, as recited in amended claim 17. *Sullivan* only teaches using optical elements 38-40 to form projection surfaces (Figs. 4-7 and col. 10, lines 1-6), not to prevent an interference pattern.

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Therefore, the rejection of claim 17 under 35 U.S.C § 102(e) as anticipated by *Sullivan* is improper, and claim 17 is allowable for at least the above reasons. Also, dependent claims 18-22 are allowable by virtue of their dependence from allowable claim 17, in addition to the respective patentable subject matter recited in claims 18-22.

Further to the rejection of claim 22 under 35 U.S.C § 102(e) as anticipated by *Sullivan*, the Examiner indicated claim 22 contained allowable subject matter on page 3 of the Office Action. However, to the extent that the Examiner has rejected claim 22 under 35 U.S.C § 102(e) as anticipated by *Sullivan*, Applicants respectfully traverse the rejection. Dependent claim 22 is allowable by virtue of its dependence from allowable claim 17, in addition to the patentable subject matter recited in claim 22.

**REJECTION OF CLAIMS 31-39 UNDER 35 U.S.C. § 102(b)**

Applicants respectfully traverse the rejection of claim 31 under 35 U.S.C. § 102(b) as anticipated by *Leung* because *Leung* does teach each and every element of claim 31. Particularly, *Leung* does not teach at least one object between the first screen and the second screen capable of randomizing polarized light, as recited in amended claim 31. *Leung* merely teaches a method of shuttering (col. 7, lines 50-54) or absorbing (abstract, lines 3-5) light from a rear panel such that no image is displayed on a front panel because the shuttered or absorbed light does not reach a front screen. However, in claim 13, a viewable image is prevented from being displayed by diffusing and thereby randomizing polarized light. Therefore, the rejection of claim 31 under 35 U.S.C. § 102(b) as anticipated by *Leung* is improper, and claim 31 is allowable for at least this reason. Further, dependent claims 32-39 are also allowable by virtue of their

dependence from allowable claim 31, in addition to the respective patentable subject matter recited in claims 32-39.

**REJECTION OF CLAIMS 40-48 UNDER 35 U.S.C. § 102(b)**

Applicants respectfully traverse the rejection of claim 40-48 under 35 U.S.C. § 102(b) as anticipated by *Leung* because *Leung* fails to teach each and every element in each claim. Particularly, *Leung* merely teaches generating volumetric images (see abstract; col. 7, lines 42-45; and col. 8, lines 35-37), whereas claim 40 does not claim the generation of volumetric images. Rather, claim 40 is concerned with the display of images on a multi-layered basis. The display of images are on separate and independent screens and the images do not need to be related to form a volumetric image.

Further, the separate images may be different foreground and/or background images, as recited in claims 41 and 42. In contrast, *Leung* only teaches producing a volumetric image whereby the final image produced is dependent on each screen producing a related image (see abstract; col. 7, lines 42-45; and col. 8, lines 35-37). For example, as illustrated in Fig. 2b and described at col. 8, lines 35-41, *Leung* teaches producing a volumetric image whereby the final image produced is dependent on each screen producing a related image that represents the contours (i.e., the surface) of a single 3-dimensional object. This is not the same as the display of independent foreground and background images, as recited in claim 40, or the display of two independent foreground images, as recited in claim 41.

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Additionally, *Leung* does not teach at least using a selective diffuser layer between a first screen and a second screen to selectively diffuse light to render at least one first image on a first screen or portions thereof opaque, as recited in claim 43. Similarly, *Leung* does not teach at least using a selective diffuser layer between a first screen and a second screen to selectively diffuse polarized light to render at least one first image on a first screen or portions thereof transparent, as recited in claim 44. *Leung* merely teaches producing a 3-dimensional object and describes representing the surface of a single 3-dimensional object by taking discreet slices along the depth direction of the 3-dimensional object in order to project the slices onto a single plane at the respective depths. This is not the same as using a selective diffuser layer between a first screen and a second screen to selectively diffuse light in order to render at least one first image on a first screen or portions thereof *opaque*. Neither is it the same as using a selective diffuser layer between a first screen and a second screen to selectively diffuse polarized light to render at least one first image on a first screen or portions thereof *transparent*.

Finally, *Leung* fails to teach at least that the multi-layered image display is capable of receiving images representing image depth extracted from two-dimensional images by a video compression algorithm, as recited in claim 45. Neither does *Leung* teach at least that the video compression algorithm may assign a depth to a pixel: by determining an amount of change in the pixel from one image frame to a successive image frame, as recited in claim 46; by determining an amount of focus in a subset of pixels, as recited in claim 47; or by determining an amount of sharpness in a subset of

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pixels, as recited in claim 48. *Leung* teaches nothing about video compression or how pixels may be assigned as respectively recited in claims 46-48.

Therefore, the rejection of claims 40-48 under 35 U.S.C. § 102(b) as anticipated by *Leung* is improper, and claims 40-48 are allowable for at least the above reasons.

**INFORMATION DISCLOSURE STATEMENT OF OCTOBER 25, 2001**

Applicants submitted an Information Disclosure Statement with a PTO-1449 Form to the United States Patent and Trademark Office (USPTO) on October 25, 2001. Applicants take this opportunity to ask the Examiner to consider the documents listed on the PTO-1449 Form and to indicate that they were considered by making appropriate notations on that form and returning a copy of the same.

**REQUEST FOR APPROVAL OF DRAWING CHANGES**

Applicants submitted a Request for Approval of Drawing Changes to the USPTO on March 1, 2002. Applicants take this opportunity to ask the Examiner to confirm approval of the drawing changes.

**CONCLUSION**

In view of the foregoing remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of pending claims 17-48.

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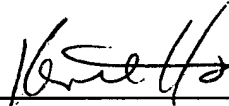
Attached hereto is a marked-up version of the changes made to claims 17-19 and 31. The attachment is captioned "Appendix to Amendment of February 21, 2003." Deletions appear as normal text enclosed in bold, square brackets [ ] and additions appear as underlined, bold text.

If there is any additional fee due in connection with the filing of this Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: February 21, 2003

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**APPENDIX TO AMENDMENT OF FEBRUARY 21, 2003**

**Version with Markings to Show Changes Made**

Amendments to the Claims

17. (Amended) A multi-layered image display comprising:  
a first screen capable of [displaying] **generating** a first image;  
a second screen capable of [displaying] **generating** a second image, wherein  
the first screen is in front of the second screen; and  
a slightly diffuse layer between the first screen and the second screen, **wherein**  
**the slightly diffuse layer is adapted to prevent observation of an interference**  
**pattern by an observer of the multi-layered image display.**
18. (Amended) The multi-layered image display of claim 17, wherein the first  
screen is a selectively transparent foreground screen capable of [displaying]  
**generating** a foreground image and the second screen is a background screen capable  
of [displaying] **generating** a background image.
19. (Amended) The multi-layered image display of claim 17, wherein the first  
screen is a first selectively transparent foreground screen capable of [displaying]  
**generating** a first foreground image and the second screen is a second selectively  
transparent foreground screen capable of [displaying] **generating** a second foreground  
image.
31. (Amended) A multi-layered image display comprising:  
a first screen capable of displaying a first image;

a second screen capable of displaying a second image, wherein the first screen and the second screen are transmissive polarized display devices; there is no polarizer on at least one face of at least the first screen or the second screen; and the first screen is in front of the second screen; and

at least one object between the first screen and the second screen capable of [blocking] randomizing polarized light.

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